

REMARKS

Claims 48 to 52 are added, and therefore claims 25 to 52 are now pending in the present application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicant thanks Examiner for acknowledging all claims for foreign priority.

Applicants also note that claims 26 to 28 and 36 were not rejected based on the applied references. These claims have been rewritten as new claims 49 to 51 and 52 and are therefore allowable, as explained below.

On page 2 of the Office Action, the Office Action objected to the Title.

While the objection may not be agreed with, to facilitate matters, the Title has been rewritten. Withdrawal of the objection is therefore respectfully requested.

The Office Action also objected to the Abstract and also requested that the abstract make reference to “high performance” and “high reliability” modes. To facilitate matters, the Abstract has been rewritten. As to high performance and high reliability modes, it is respectfully submitted that the Abstract is sufficiently descriptive under M.P.E.P. § 608.01(b). Section 608.01(b) simply makes plain that the purpose of the abstract is to “enable the [USPTO] and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure.” *Id.* In any event, the M.P.E.P. is suggestive in this regard. It is therefore respectfully requested that the objection to the Abstract be withdrawn.

With respect to page 3 of the Office Action, the objections to the drawings is respectfully traversed.

In particular, the drawings were objected to as being informal in nature. It is respectfully submitted that M.P.E.P. § 608.02(b) explicitly states that “*the Office no longer considers drawings as formal or informal. Drawings are either acceptable or not acceptable. Drawings will be accepted by the Office of the Patent Application Processing if the drawings are readable and reproducible for publication purposes.*” *Id.* The drawings are

therefore suitable under 37 C.F.R. § 1.84 and are suitable for reproduction under M.P.E.P. § 507. Also, all the reference numbers cited by the Examiner (17, 110, 210, 302, 303, 303A, 304, 305C, 306, 306A, 307, and 502) are clearly present in the figures. To facilitate matters however, Applicant has replaced the existing reference numbers to make plainer the presence of the cited reference numbers.

Thus, the accompanying five Replacement Sheets for Figures 1 to 5 replace the previous handwritten reference numbers with clear and distinct reference numbers. No new matter has been added, and the Replacement Sheets are supported by the present application, including the specification. Entry and approval of the Replacement Sheets for Figures 1 to 5 is therefore respectfully requested.

Claims 25, 25, 31, 39, 43, and 47 were objected to because of asserted informalities.

While the objections may not be agreed with, to facilitate matters, the claims have been rewritten, as appropriate, so as to obviate the objections. Withdrawal of the objections is therefore respectfully requested.

With respect to page 4 of the Office Action, claims 25-47 were rejected under the second paragraph of 35 U.S.C. § 112 as to indefinite.

As to the terms “clock cycle”, “full cycle”, and “half cycle” entail, no clarification is necessary. The term “clock cycle” is known to one skilled in the art as the time between two clock pulses and is discussed in the specification. (See Substitute Specification, page 2, lines 19-25, page 3, lines 22-26, page 4, lines 1-7, page 11, lines 7-13). Further, the terms “full cycle” and “half cycle” are also explicitly defined in the specification, with the “half cycle” being twice as fast as the “full cycle”. (See *id.*).

Still further, the terms “clock cycle”, “full cycle” and “half cycle” are used in the sense of “clock speed”. This is plain from the specification, which discloses that the half cycle is twice as fast as the full cycle. If “clock cycle” only concerned a time, it could be longer or shorter – but not faster. If it related to a rate, it could only be higher or lower – but not faster.

It is therefore respectfully requested that the indefiniteness rejections be withdrawn.

The Office Action also rejected claim 32, 35, and 37 under §112 for providing insufficient basis for a limitation in the claim.

While the rejections may not be agreed with, to facilitate matters, the claims have been rewritten, as appropriate, so as to obviate the rejections.

As to claim 34, as presented, it provides that the states and the results are released simultaneously. New claim 48 has been added to recite that the states and the results are released successively. In addition, clarification was requested of the phrase “wherein the feed units as register system” in claim 39. Claim 39 has been amended to cite that the feed units may operate as a register system. For the foregoing reasons, withdrawal of the rejections is requested.

Withdrawal of the rejections is therefore respectfully requested.

Claims 25, 29 to 35, 37 to 40, and 42 to 47 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent 6,615,366 (“Grochowski”).

As to the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. *See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). Further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the claimed subject matter of the claims, as discussed herein. *See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986).

As further regards the anticipation rejections, to the extent that the Final Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art.” M.P.E.P. § 2112; *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int’l. 1990). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

While the rejections may not be agreed with, to facilitate matters, the claims have been rewritten to better clarify the claimed subject matter.

Claim 25, as presented, is to a *method for processing operands in a processing unit having at least two execution units, comprising: operating the execution units at a predefinable clock cycle; triggering the execution units by control signals for a processing of the operands; switching between a first operating mode and a second operating mode; in the first operating mode, supplying the execution units with the same operands; in the second operating mode, supplying the execution units with different operands, in which the execution units are triggered by the same control signals for the processing of the operands in the first operating mode, and the execution units are controlled by different control signals for the processing of the operands in the second operating mode; comparing the operands and resulting data through a comparator to check for agreement, the operands and the resulting data being released and written to a bus if in agreement, the operands and the resulting data being withheld and written to an error register if not in agreement.*

Claim 25, as presented, provides that *the operands and the results are compared in a comparator for agreement and if the operands and results are in agreement, they are released and subsequently written to a bus.* The Grochowski reference does not identically disclose (or suggest) that the operands and results are written to a bus if in agreement. Even if Grochowski may refer to comparing an operand and an operand value, it does not take any action if the operand and value derived from the operand are in agreement. Moreover, the system only acts in the event of parity between the operand and the operand value. (See Grochowski, col. 12, line 62 to col. 13, line 37). Accordingly, Grochowski does not identically disclose (or suggest) the feature of writing the operand and operand values to a bus if they are in agreement.

Claim 25, as presented, also provides that if the operands and the results are not in agreement, they are written to an error register and not released. This subject matter is not identically disclosed (or suggested) in the Grochowski reference, since it indicates that values derived from the operands are compared with the operands and any discrepancies are automatically overwritten and corrected with the correct value. (See Grochowski, col. 13, lines 9-37). The presently claimed subject matter provides the advantage of the results and operands being written to an error register, which allows for the handling of the error at a later time or to overlook an error if the error is insignificant. The Grochowski reference does

not disclose an error register, and it also does not disclose or suggest that deviating operands and results may be written into such a register for later handling.

For the foregoing reasons, claim 25, as presented, is allowable, as are its dependent claims 29 to 34.

Claim 35 includes features like those of claim 25, as presented, and therefore claim 35, and its dependent claims 37 to 40 and 42 to 46, are allowable for essentially the same reasons.

It is noted that the Office Action did not address the presence of the feed units -- which are separate and distinct from the execution units.

Claims 47 also includes features like those of claim 25, as presented, and is therefore also allowable for the same reasons.

As to the conclusory assertions that the operation of the executing units at a predefinable clock cycle and triggering of execution units by control signals are inherent – for which something must necessarily be true -- and not merely that it might be true, it is requested that the Examiner provide specific evidence to establish those assertions and/or contentions that may be supported by the Official Notices under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because the § 102 rejections are apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also M.P.E.P. § 2144.03).

Claim 41 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Grochowski in view of U.S. Patent No. 5,828,868 (“Sager”).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and

not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Although the Examiner refers to claim 43 in the discussion of the § 103(a) rejection, Applicant assumes that the Examiner is actually referencing claim 41. Claim 41 depends from claim 35, as presented, and is therefore allowable for essentially the same reasons as claim 35, as presented, since the Sager reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary Grochowski reference.

Applicant would like to point out that the Examiner did not address claims 26 to 28 under §102 (e) or § 103 (a) in the Office Action, and thus the only rejections of these claims was under §112.

New claim 48 does not add any new matter and is supported by the present application. Claim 48 depends from claim 25, and it is therefore allowable for the same reasons as 25. New claims 49 to 51 correspond to claims 26 to 28, since these claims were not rejected based on the applied references, and since any other rejections have been addressed herein. In particular, claim 49 corresponds to claim 26, but has been rewritten as an independent claim to include the features of earlier presented claims 25 and 26. Claims 50 and 51 depend from claim 49, and they are therefore allowable for the same reasons. Claim 52 corresponds to earlier presented claim 35 and claim 36, since claim 36 was also not rejected based on the applied references, and since any other rejections have been addressed herein. Accordingly, claims 48 to 52 are allowable.

CONCLUSION

In view of the above, it is respectfully submitted that all of presently pending claims 25 to 52 are allowable. It is therefore respectfully requested that the rejections and objections be withdrawn. Since all issues raised by the Examiner have been addressed, an early and favorable action on the merits is respectfully requested.

Respectfully submitted,

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